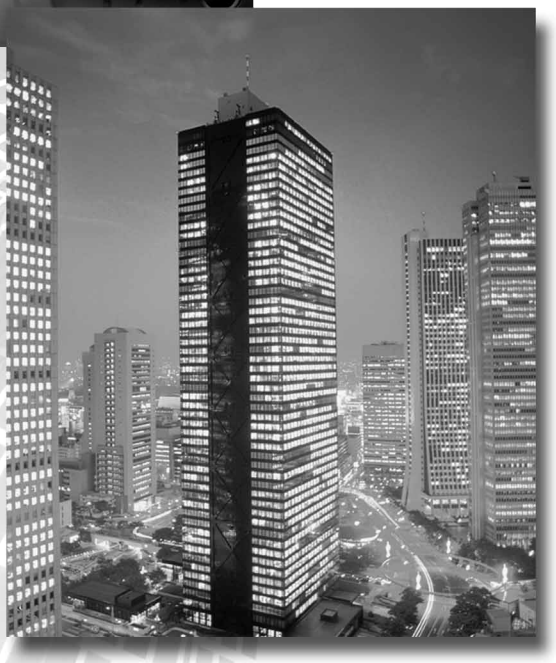
HEWLETT® PACKARD

HP | Vectra | Corporate PCs



# PC Service Handbook Chapter

## HP Vectra VL400 Small Form Factor

www.hp.com/go/vectrasupport

## Notice

Information contained in this document is subject to change without notice.

**Hewlett-Packard makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.** Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Hewlett-Packard assumes no responsibility for the use or reliability of its software on equipment that is not furnished by Hewlett-Packard.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of Hewlett-Packard Company.

Intel, Celeron, and Pentium are either registered trademarks or trademarks of Intel. Microsoft, MS, MS-DOS, Windows and Windows NT are either registered trademarks or trademarks of Microsoft Corp. in the United States and/or other countries.

## Contents

This chapter provides:

- ❒ Product model numbers
- ❒ Supported Accessories
- ❒ System Board, BIOS, and memory information
- ❒ Part numbers

## Replacement and Exchange Parts

The difference between a replacement and an exchange part is that when using an exchange part you should return the replaced part to HP.

Replacement and exchange parts listed in this manual are subject to change. However, updated part numbers are automatically cross-referenced to the old number. This means that you will receive the correct part using the numbers listed in this manual (even if the part's actual number has been updated).

## Ordering Parts

Contact your local HP Customer Care Center or an HP Authorized support provider to get parts. Diagnostic is required in both cases, prior to any shipments. For HP Customer Care Centers `www.hp.com/go/vectrasupport` and select ASSISTANCE

# HP Vectra VL400 SFF PC

## Models and Accessories

| Product Number | Hard Drive | Video Controller | Std. RAM | Multimedia | OS[1] |
|---|---|---|---|---|---|
| Vectra VL400 SFF PC<br>**Models with Intel Celeron Processor, 66 MHz System Bus Speed, and 128 KB Level 2 Cache Memory** | | | | | |
| **HP Vectra VL400 SFF PC 566/66** (CPL: 06/2000 ▶) | | | | | |
| **P1914T** | 10 GB IDE | Direct AGP integrated in Intel chipset. | 64 MB SDRAM | 24 × Max IDE Slim CD-ROM | W95 |
| **HP Vectra VL400 SFF PC 633/66** (CPL: 06/2000 ▶) | | | | | |
| **D9818A/T** | 10 GB IDE | Direct AGP integrated in Intel chipset. | 64 MB SDRAM | 24 × Max IDE Slim CD-ROM | W95 |
| **P1915T** | | | 128 MB SDRAM | | W2000 |
| Vectra VL400 SFF PC<br>**Models with Intel Pentium III Processor, 133 MHz System Bus Speed, and 256 KB Level 2 Cache Memory** | | | | | |
| **HP Vectra VL400 SFF PC 733/133** (CPL: 06/2000 ▶) | | | | | |
| **D9820A/T** | 10 GB IDE | Direct AGP integrated in Intel chipset. | 64 MB SDRAM | 24 × Max IDE Slim CD-ROM | W95 |
| **D9821A/T** | | | 128 MB SDRAM | | W2000 |
| **HP Vectra VL400 SFF PC 800/133** (CPL: 06/2000 ▶) | | | | | |
| **D9828A/T** | 10 GB IDE | Direct AGP integrated in Intel chipset. | 64 MB SDRAM | 24 × Max IDE Slim CD-ROM | W95 |
| **D9829A/T** | | | 128 MB SDRAM | | W2000 |

## HP Vectra VL400 SFF PC

| Product Number | Hard Drive | Video Controller | Std. RAM | Multimedia | OS[1] |
|---|---|---|---|---|---|
| **HP Vectra VL400 SFF PC 866/133** (CPL: 06/2000 ▶) | | | | | |
| **P1555A/T** | 10 GB IDE | Direct AGP integrated in Intel chipset. | 64 MB SDRAM | 24 × Max IDE Slim CD-ROM | W95 |
| **P1556A/T** | | | 128 MB SDRAM | | W2000 |
| Vectra VL400 SFF PC<br>**Models with User Defined Processor, Main Memory, and Hard Disk** | | | | | |
| **HP Vectra VL400 SFF PC**[2] (CPL: 06/2000 ▶) | | | | | |
| **D9860E** | User defined | | | | |

1. Windows 2000 or Windows 95 operating system is preloaded on those models indicated in the table.
   Models with Windows 2000 operating system come with a CD-ROM for recovering Windows 2000 or downgrade to Windows NT 4.0 WS.
   Models with Windows 95 operating system come with a CD-ROM for recovering Windows 95 or upgrade to Windows 98.
2. Channel Assembly Program (CAP) models: Processor type and speed, hard disk size, memory and operating system is user defined.

5

## Note

All models have:

- ❒ Integrated Crystal CS4299 Audio Codec '97 2.1 compatible stereo audio codec.
- ❒ Integrated 3Com 3C905C-TX network controller.
- ❒ Integrated Direct AGP video controller.

## Supported Accessories

**Memory**

| | |
|---|---|
| 64-MB SDRAM, non-ECC PC133 main memory module | P1536A |
| 128-MB SDRAM, non-ECC PC133 main memory module | P1537A |
| 256-MB SDRAM, non-ECC PC133 main memory module | P1538A |
| 512-MB SDRAM, non-ECC PC133 main memory module | P1539A |

**Documentation**

HP Information CD-ROM 5011-8109

To order your HP Information CD-ROM from HP's Web:

1 Go to **www.hp.com/go/vectrasupport**, then select **Manuals**

2 Select your product, then select **HP Information CD-ROM**

**Input Devices**

| | |
|---|---|
| HP Standard Keyboard | C4735A |
| HP Multimedia Keyboard | C4742A |
| HP 2-button Mouse | C3751B |
| HP Scrolling Mouse | C4736A |
| HP Cordless Scrolling Mouse | C4740A |

**Monitors**

All current HP Monitors (see the *HP Monitors Service Handbook*)

**Mass Storage**

| | |
|---|---|
| 10-GB 5400 rpm Ultra ATA/66 hard disk drive | D9623A |
| 15-GB 7200 rpm Ultra ATA/66 hard disk drive | D7517A |
| 30-GB 7200 rpm Ultra ATA/66 hard disk drive | D9804A |
| 9.1-GB 7200 rpm Ultra 160 SCSI hard disk drive | D6938B |
| HP 100 MB Atapi II ZIP drive | D6650C |

**Multimedia**

| | |
|---|---|
| HP Amplified Speakers - by Labtec 10WRMS | D4545A |
| HP Amplified Speakers - by Labtec 4WRMS | D6861A |
| HP Standard Headset | D8387A |
| HP Amplified Internal Speaker | P1552A |

**Data Communications and LAN Adapter Boards**

| | |
|---|---|
| HP 56K V90 USB External Modem | D8384B |
| HP 56K V90 PCI Internal Modem | D7519A |
| HP Intel Pro/100+ Management Adapter | D7506A |
| HP Intel Pro/100+ Management Adapter (pack of 10) | D7507A |

**Security**

| | |
|---|---|
| HP Master Pass Key System Kit | D6655C |
| HP Spare Master Pass Key | D6658B |
| HP Locks for Master Pass Key System (pack of 50) | P1550A |
| HP ProtectTools Smart Card Reader Kit | D8436B |
| HP Power Protection Device | D7524A |

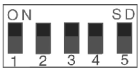
**I/O Interfaces**

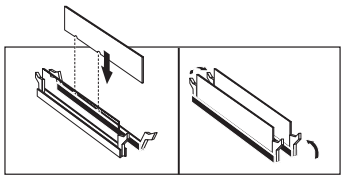
| | |
|---|---|
| HP Ultra2 SCSI Adapter Card | D9529A |

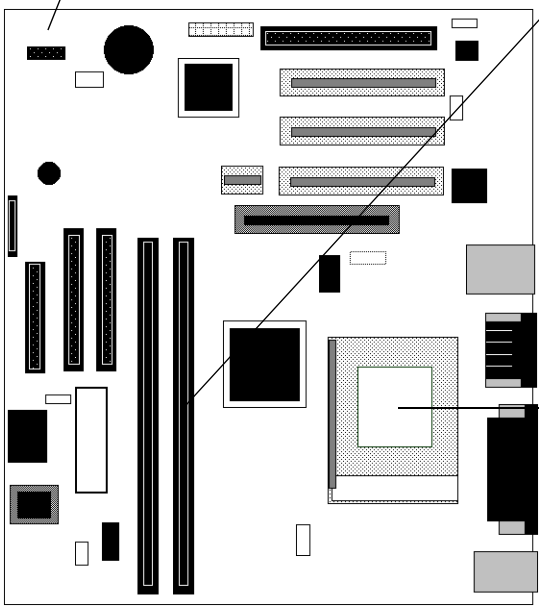
# System Board, BIOS, and Memory

**Main Memory:**
Two DIMM sockets which support up to a maximum of 512 MB.
Install 64 MB, 128 MB, 256 MB or 512 MB SDRAM modules.
You can install only one 512 MB module.

**System Board Switches:**
See the table on the next page.





**Processor:**
Intel Pentium III or Intel Celeron FC-PGA package with Zero Insertion Force (ZIF) socket.

5

## System Board Switches

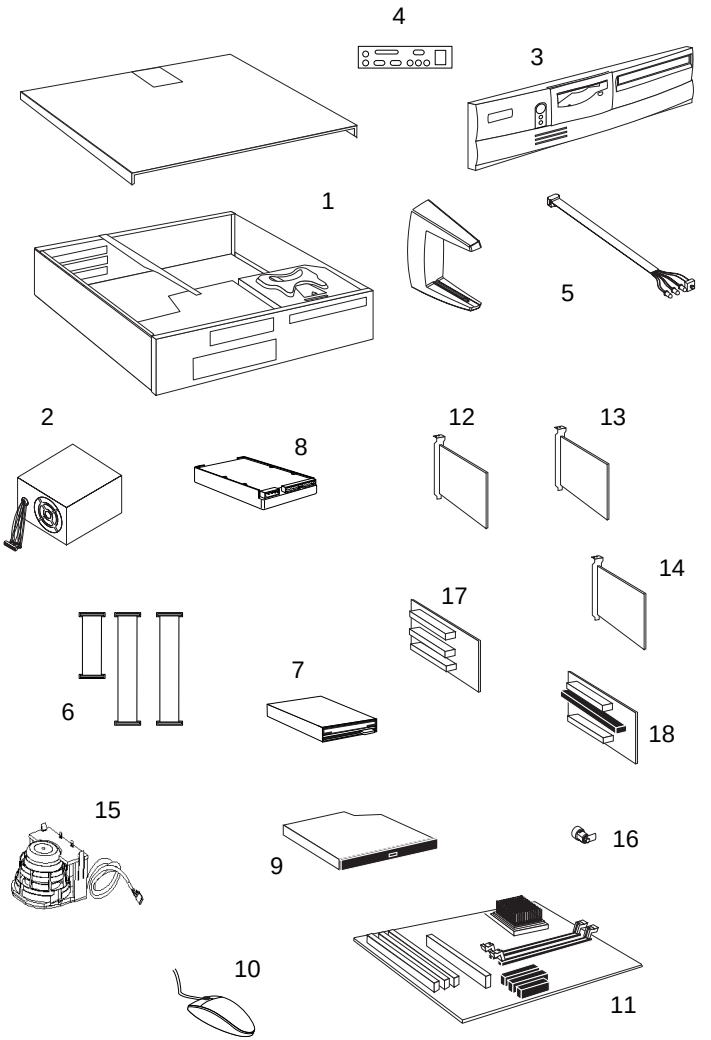
| Switch | | Function | Default |
|---|---|---|---|
| **1** | On | Clears CMOS and passwords (to reload the *Setup* program defaults) | **Off** |
| | **Off** | **Normal operation** | |
| **2** | On | Clears User and Administrator passwords | **Off** |
| | **Off** | **Normal operation** | |
| **3** | On | Crash recovery mode: forces booting in the BIOS boot block area | **Off** |
| | **Off** | **Normal operation** | |
| **4** | On | Hardware boot block protection | **Off** |
| | **Off** | **Normal operation (Software boot block protection )** | |
| **5** | On | Reserved | **Off** |
| | **Off** | **Normal operation** | |

## BIOS History

For the latest BIOS, the flasher utility program, and the BIOS history refer to the HP's Web site.

| http://www.hp.com/go/vectrasupport/ |
|---|

# Part Numbers



## Parts List for HP Vectra VL400 SFF PC

| Item | Description | Repl. Part Number | Exchange Part Number |
|---|---|---|---|
| 1 | Box assembly (chassis assembly, power supply, cable kit, FDD filler kit, stand foot) | 5065-2501 | — |
| 2 | Power supply | 0950-3797 | — |
| 3 | Front bezel assembly | 5065-2509 | — |
| 4 | Rear bezel | 5002-6259 | — |
| 5 | Power switch kit | 5065-2502 | — |
| 6 | HDD, FDD and CD-ROM cable kit | 5065-2508 | — |
| 7 | 1.44 Floppy disk drive | D2035-60293 | — |
| 8 | IDE hard disk drive[1]<br><br>10 GB<br>15 GB<br>30 GB | <br><br>—<br>—<br>— | <br><br>D9805-69001<br>D9812-69001<br>D9813-69001 |
| | SCSI hard disk drive[1]<br><br>9.1 GB Ultra2 Wide | <br><br>— | <br><br>D9475-69001 |
| 9 | 24× Max IDE Slim CD-ROM drive<br>5× IDE DVD-ROM drive | D4383-60101<br>D4386-60101 | —<br>— |
| 10 | Standard mouse<br>Enhanced mouse with scroll/zoom wheel<br>Standard keyboard<br>Multimedia keyboard | C3751-60201<br>C4736-60101<br>C4739-601xx[2]<br>C4742-60xxx[2] | —<br>—<br>—<br>— |
| 11 | System board | See PC's system board parts list | |
| 12 | Matrox Millennium G450 PCI DualHead, 16 MB video card | 5065-3896 | — |
| 13 | Symbios® SYM8952U Ultra2 SCSI card | 5064-7466 | — |
| 14 | HP 56K V90 PCI Internal Modem | D7519-63001 | — |
| 15 | Internal speaker | 5184-3847 | — |
| 16 | Lock assembly | 5064-9111 | — |
| 17 | ATX Standard riser card (3 PCI slots) | 5065-2555 | — |
| 18 | ATX Optional riser card (one ISA/PCI slot and one PCI) | 5065-2554 | — |
| not shown | Power cord | 8120-xxxx[3] | — |
| | Airflow guide and fan kit | 5065-2503 | — |

1. For optional disk drive information, see the Accessory Service Handbook.
2. Where "xx" is the code for your national keyboard (see the *Accessory Service Handbook*)
3. Where "xxxx" is the code for your national power cord.

## HP Vectra VL400 SFF PC

### System Board Parts List for HP Vectra VL400 SFF PC

| Description | Repl. Part Number | Exchange Part Number |
|---|---|---|
| **System board:** | | |
| Vectra VL400 system board with audio subsystem | D9820-60003 | D9892-69003 |
| **Processors (FC-PGA package):** | | |
| Intel Celeron 533A/66 128KB L2 cache | D9902-63001 | — |
| Intel Celeron 566/66 128KB L2 cache | D9903-63001 | — |
| Intel Celeron 600/66 128KB L2 cache | D9904-63001 | — |
| Intel Celeron 633/66 128KB L2 cache | P1836-63001 | — |
| Intel Celeron 667/66 128KB L2 cache | P1837-63001 | — |
| Intel Pentium III 667B/133 256KB L2 cache | — | D9905-69001 |
| Intel Pentium III 733B/133 256KB L2 cache | — | D9906-69001 |
| Intel Pentium III 800EB/133 256KB L2 cache | — | D9872-69001 |
| Intel Pentium III 866/133 256KB L2 cache | — | D9873-69001 |
| Intel Pentium III 933/133 256KB L2 cache | — | D9486-69001 |
| Intel Pentium III 1000/133 256KB L2 cache | — | P1579-69001 |
| Active heatsink | 5065-1297 | — |
| Passive heatsink | 5065-1296 | — |
| **Main memory modules:** | | |
| 1 × 64-MB non-ECC PC133 SDRAM | P1536-63001 | — |
| 1 × 128-MB non-ECC PC133 SDRAM | P1537-63001 | — |
| 1 × 256-MB non-ECC PC133 SDRAM | P1538-63001 | — |
| 1 × 512-MB non-ECC PC133 SDRAM | P1538-63001 | — |
| **Video memory modules:** | | |
| 4-MB AIMM (AGP Inline Memory Module) | 5184-3852 | — |
| AIMM retention mechanism | 5042-4456 | — |

### Software Recovery CD-ROMs

| | |
|---|---|
| *Recovery CD-ROM for Windows NT/2000* | 5970-0170-xx[1] |
| *Recovery CD-ROM for Windows 9x* | 5970-0190-xx[1] |

1. Where "xx" is the code for your language.

### Manuals and Documentation for HP Vectra VL400 SFF PC

| | |
|---|---|
| *HP Information CD-ROM*[1] | 5011-8109 |
| *Quick User's Guide* | 5070-5020-xx |
| *Technical Reference Manual* | no number[2] |

1. The *HP Information CD-ROM* contains complete information for the HP Vectra VL400 PC.
   To order your HP Information CD-ROM from HP's Web:
   1 Go to **www.hp.com/go/vectrasupport**, then select **Manuals**
   2 Select your product, then select **HP Information CD-ROM**
2. Electronic file available on HP's Web site.